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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,600	12/09/2003	Michael T. Costello	0209-PA	4739

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CROMPTON CORPORATION
Benson Road
Middlebury, CT 06749

EXAMINER

GOLOBOY, JAMES C

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/731,600

Applicant(s)

COSTELLO ET AL.

Examiner

James Goloboy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is illogical for the lubricant composition to comprise the friction modifier and for the friction modifier to comprise the lubricant composition.

As Claims 15, 17, and 18 are analogous to Claims 8, 10, and 11, it has been assumed in the rejections below that Claim 16 is meant to be the analog of Claim 9 where "The lubricant composition of claim 8" has been replaced by "The lubricant composition of claim 16".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1-2, 8, 12, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Papay (U.S. Pat. No. 5,652,201).

Papay discloses in column 13 line 43 an overbased calcium sulfonate additive, and in column 45 lines 39-43 an additive of triethanolamine reacted with a fatty acid, as recited in claims 1, 2, and 8. Although the latter additive is not disclosed specifically as a friction modifier, case law holds that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Papay further discloses in columns 47-49 lubricant oil stocks to be combined with the additive mixture, meeting claims 12 and 15.

5. Claims 1, 2, 6, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Denis (U.S. Pat. No. 4,954,273).

In column 14 (Fully Formulated Examples IV and V), Denis discloses a lubricant composition comprising a lubricant oil stock (15W-40 weight oil), an overbased calcium carboxylate, and an overbased calcium sulfonate, as recited in Claims 1, 2, 6, and 12.

6. Claims 1, 2, 5, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Watts (U.S. Pat. No. 5,885,943).

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In columns 7 and 8 (Example 2), Watts discloses an additive package including a polyisobutylene succinic anhydride (PIBSA), as recited in Claim 6, and in column 4 lines 46-55 teaches that the additive package may be incorporated into a lubricating oil, along with a detergent, Overbased calcium sulfonate is disclosed in column 6 lines 50-51 as a suitable detergent, forming the additive and lubricant packages of Claims 1, 6, and 12.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 3-4 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Papay in view of Papke (U.S. Pat No. 4,995,993).

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The discussion of Papay in paragraph 4 above is incorporated here by reference. Papay does not disclose whether the overbased calcium sulfonate used in the lubricant composition is crystalline or amorphous, and also does not disclose the particle size of the overbased calcium sulfonate. Papke, in column 4 lines 52-59 discloses a preferred amorphous overbased calcium sulfonate with a particle size of 100 to 150 Å (10-15 nm), and a crystalline overbased calcium sulfonate with a particle size of 400-600 Å (40-60 nm), falling within or overlapping the ranges recited in Claims 3-4 and 13-14.

It would have been obvious to one of ordinary skill in the art to include in Papay an amorphous overbased calcium sulfonate with small particle size, as disclosed by Papke to reduce haziness, and it would have been obvious to one of ordinary skill in the art to include in Papay a crystalline overbased calcium sulfonate in order to attain better antiwear performance.

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Papay in view of Ramey (U.S. PG Pub. No. 2004/0063589).

The discussion of Papay in paragraph 5 above is included here by reference. Papay discloses classes of friction modifier additives from column 46 line 52 through column 47 through line 12, but does not teach specific additives.

Ramey discloses, in paragraphs 79-81 (Example 10), an overbased barium carboxylate additive (barium oleate), which as taught in the abstract has utility as a friction modifier.

It would have been obvious to one of ordinary skill in the art to modify Papay by including the barium carboxylate friction modifier taught by Ramey, in order to

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simultaneously gain the advantages of detergency, friction modification, and acid neutralization with a single additive.

11. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Papay in view of Chladek (U.S. Pat. No. 3,754,684).

The discussion of Papay in paragraph 4 above is incorporated here by reference. Papay discloses a lubricant composition requiring the combination of a lubricant oil stock, an overbased calcium sulfonate additive, and an additive of triethanolamine reacted with a fatty acid, as in Claim 19(a). Papay does not disclose the step of storing the lubricant composition in a vessel.

Chladek, in the abstract, discloses a storage vessel for lubricants, as recited in Claim 19(b). It would have been obvious to one of ordinary skill in the art to store the lubricant composition disclosed by Papay in a vessel, as taught by Chladek for the purpose of transporting the lubricant, or as part of a larger lubricant dispensation apparatus as taught by Chladek.

12. Claims 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Papay in view of Hartley (U.S. PG Pub. No. 2004/0180798).

The discussion of Papay in paragraph 4 above is incorporated here by reference. Papay discloses classes of friction modifier additives from column 46 line 52 through column 47 through line 12, but does not teach specific additives.

Hartley, in the reference's Claim 5, discloses a lubricating oil composition comprising a friction modifier formed by the reaction of triethanolamine and a fatty acid, where suitable fatty acids are described in paragraph 8 lines 4-11, including oleic, erucic, and tall oil fatty acids as recited in Claims 9 and 16, and also including several naturally occurring fatty acid compositions comprising some of the acids recited in Claims 9 and 16.

It would have been obvious to one of ordinary skill in the art to include in Papay the specific additives disclosed by Hartley in order to improve fuel economy, as taught by Hartley in paragraphs 1-2 and 58-59.

13. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Papay in view of Chladek as applied to claim 19 above, and further in view of Hartley.

The discussions of Papay in paragraph 4 above, Papay in view of Chladek in paragraph 11 above, and Papay in view of Hartley in paragraph 12 above are incorporated here by reference. Papay in view of Chladek discloses a method for storing a lubricant composition in a vessel as recited in Claim 19, and teaches an overbased calcium sulfonate additive, but does not teach a specific friction modifier additive for the lubricant composition.

Hartley, in the reference's Claim 5, discloses a lubricating oil composition comprising a friction modifier formed by the reaction of triethanolamine and a fatty acid, where suitable fatty acids are described in paragraph 8 lines 4-11, including oleic,

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erucic, and tall oil fatty acids as recited in Claim 20, and also including several naturally occurring fatty acid compositions comprising some of the acids recited in Claim 20.

It would have been obvious to one of ordinary skill in the art to include in Papay in view of Chladek the specific additives disclosed by Hartley in order to improve fuel economy, as taught by Hartley in paragraphs 1-2 and 58-59.

14. Claims 10-11 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Papay in view of Calhoun (U.S. Pat. No. 3,198,737).

The discussion of Papay in paragraph 4 above is incorporated here by reference. Papay discloses classes of friction modifier additives from column 46 line 52 through column 47 through line 12, but does not teach specific additives.

Calhoun discloses in Example I a friction modifier compound comprising a diethylene glycol dioleate, a reaction product of diethylene glycol and methyl oleate, as recited in Claims 11 and 18, and in Example V Calhoun discloses a friction modifier comprising a thiodiglycol (2,2'-thioethanol) dioleate, a reaction product of thiodiglycol with methyl oleate as recited in Claims 10 and 17.

It would have been obvious to one of ordinary skill in the art to include in Papay the additives taught by Calhoun, due to their utility at extreme pressures as disclosed in column 1 of Calhoun.

Conclusion

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15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Muir (U.S. Pat No. 6,239,083) provides a discussion of the pros and cons of amorphous and crystalline overbased calcium sulfonate additives.

Best (U.S. Pat. No. 5,283,276) discloses an amorphous overbased calcium sulfonate with a particle size 100 Å (10 nm) or less.

Efner (U.S. Pat. No. 4,335,004) shows the use of diesters formed from diols or dithiols (including diethylene glycol and thiodiglycol) and fatty acids as friction modifiers.

Wahl (U.S. Pat. No. 5,678,466) discloses a liquid lubricant composition stored in a vessel.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Goloboy whose telephone number is 571-272-2476. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCG
JCG

Vasu Jagannathan
VASU JAGANNATHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700